WHAT IS CLAIMED IS:

1. A communication device for transferring a packet via an MPLS domain to a destination network, comprising:

a retaining module retaining a local label as a label assigned to the destination network and obtained by a method different from a label distribution method in the MPLS domain;

a receiving module receiving the packet that should be forwarded to the destination network;

a transmitting module transmitting the received packet toward an edge device disposed at an entrance of the MPLS domain; and

an attaching module reading the local label corresponding to the destination network from said retaining module and attaching the local label to the packet that is transmitted by said transmitting module so that said edge device executes a forwarding process of the packet received from said communication device on the basis of the local label attached to the packet.

2. A user communication device according to claim 1, further comprising a generating module generating the local label retained by said retaining module.

3. A user communication device according to claim 1, further comprising a label receiving module receiving the local label from the MPLS domain, the local label is retained by said retaining module.

4. An edge device forwarding a packet received from a communication device of users side into an MPLS domain, comprising:

a retaining module retaining a local label as a label corresponding to a destination network of the packet received from said communication device and obtained by a method different from a label distribution method in the MPLS domain, and a label corresponding to the local label and obtained by the label distribution method in the MPLS domain;

a receiving module receiving a packet attached with the local label from said communication device; and

a forwarding module reading, from said retaining module, the label corresponding to the local label attached to the packet received by said receiving module, then rewriting the local label attached to the packet with the read label, and transmitting the packet to the MPLS domain.

5. An edge device according to claim 4, wherein said forwarding module, if the local label attached to the packet is not retained by said retaining module, forwards into the MPLS domain the packet of which the local label is rewritten with a label corresponding to the destination network of the packet, and relates the local label attached to the packet to the label used for rewriting, and stores the local label and the label in said retaining module.

6. An edge device according to claim 4, wherein said

receiving module receives the packet attached with the local label generated by said communication device.

7. An edge device according to claim 4, further comprising:

a generating module generating, if the label corresponding to the destination network of the packet that is received from said communication device is obtained by the label distribution method in the MPLS domain, a local label corresponding to the obtained label; and

a notifying module notifying said communication device of the generated local label,

wherein said receiving module receives from said communication device the packet attached with the local label of which the notifying module notified.

8. A packet forwarding method of a communication device transferring a packet via a MPLS domain to a destination network, comprising steps of:

retaining a local label as a label assigned to the destination network and obtained by a method different from a label distribution method in the MPLS domain;

receiving the packet that should be forwarded to the destination network;

transmitting the received packet toward an edge device disposed at an entrance of the MPLS domain; and

reading the local label corresponding to the destination network and attaching the local label to the packet transmitted

by said transmitting step so that said edge device executes a forwarding process of the packet received from said communication device on the basis of the local label attached to the packet.

5   9. A packet forwarding method according to claim 8, further comprising a step of generating the local label retained by said retaining step.

10   10. A packet forwarding method according to claim 8, further comprising a step of receiving the local label from the MPLS domain retained by said retaining step.

11. A packet forwarding method by an edge device forwarding a packet received from a communication device of users side into 15   an MPLS domain, comprising steps of:

    retaining a local label as a label corresponding to a destination network of the packet received from said communication device and obtained by a method different from a label distribution method in the MPLS domain, and a label 20   corresponding to the local label and obtained by the label distribution method in the MPLS domain;

    receiving a packet attached with the local label from said communication device; and

    reading, from said retaining module, the label 25   corresponding to the local label attached to the packet, then rewriting the local label attached to the packet with the read label, and forwarding the packet into the MPLS domain.

12. A packet forwarding method by an edge device according to claim 11, wherein said forwarding step involves, if a local label attached to the packet is not retained by said edge device, the local label of the packet is rewritten with a label corresponding to the destination network, the packet is forwarded into the MPLS domain, and the local label is related to the label and stored.

13. A packet forwarding method by an edge device according to claim 11, wherein said receiving step involves receiving the packet attached with the local label generated by said communication device.

14. A packet forwarding method by an edge device according to claim 11, further comprising steps of:

generating, if the label corresponding to the destination network of the packet received from said communication device is obtained by the label distribution method in the MPLS domain, a local label corresponding to the label; and

notifying said communication device of the generated local label,

wherein said receiving step involves receiving the packet attached with the notified local label from said communication device.